

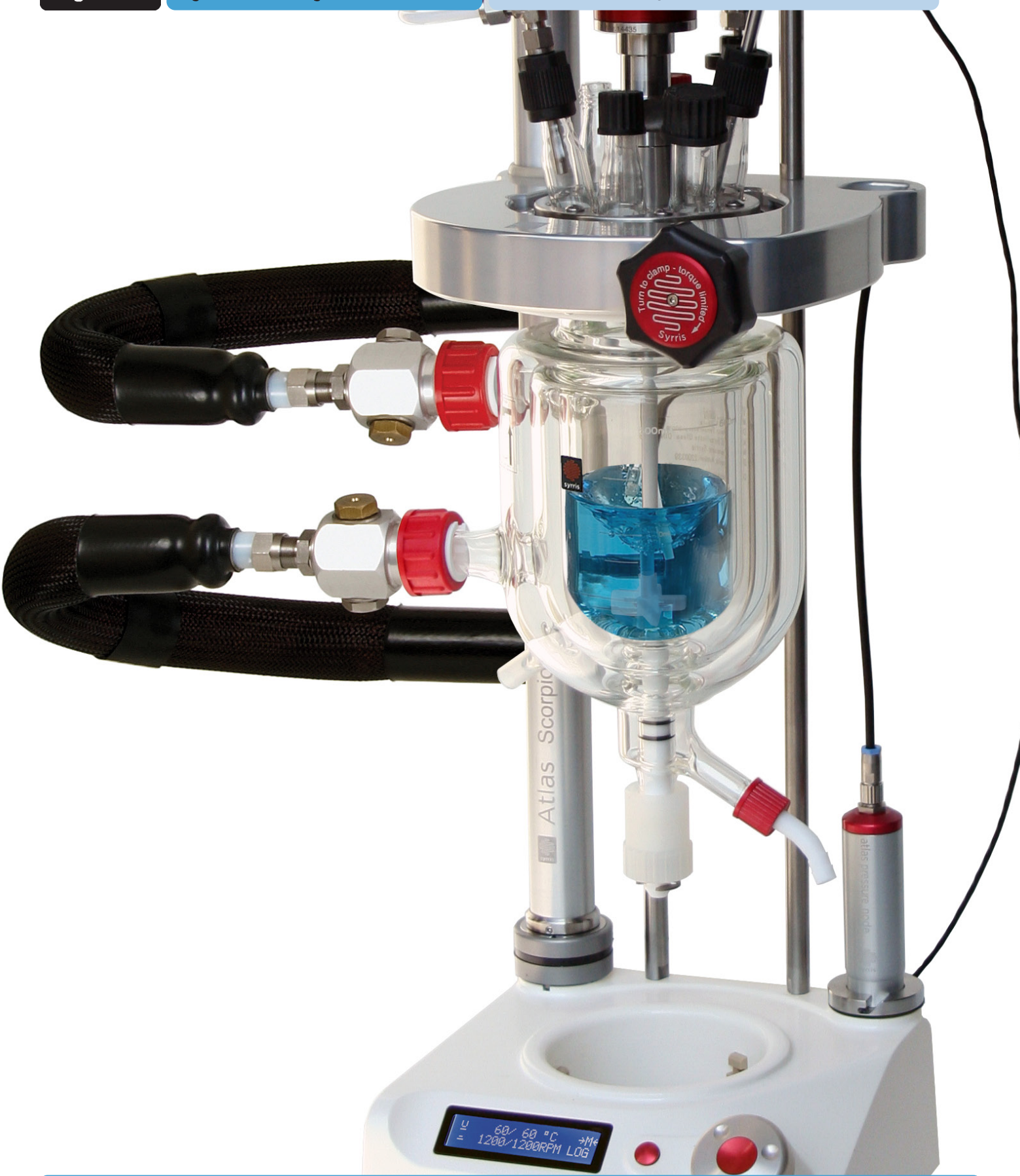


atlas

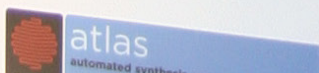
automated  
synthesis system

pressure (K)

3bar controlled  
lab reactor system



Atlas simply does it all



## What is the Atlas Potassium Pressure System?

The Atlas Potassium Pressure System is a modular 3 bar pressure reactor that can be controlled automatically or manually. Available in volumes from 100ml to 3 litres the Atlas Potassium Pressure System offers heating and/or cooling, overhead stirring, pressure sensing and options such as pressure control, mass flow control, gas selection automated addition and reaction sampling.

### Atlas Potassium Pressure System benefits:

- **Quick change vessel:** The oil drain unit, jacketed vessel clamp and quick oil connectors allow vessels to be changed in under a minute.
- **Easy to use:** No tools required, twist and click control knob, large display and intuitive.
- **High performance stirring:** The Atlas Sodium Pressure System offers powerful overhead stirring.
- **3 bar pressure:** The Atlas Potassium Pressure System has an operating pressure of up to 3 bar (see the Custom Reactor Systems for higher pressure).
- **Variety of vessels:** The Atlas Potassium Pressure System can be supplied with 100ml, 250ml, 500ml, 1L, 2L or 3L glass reaction vessels with or without vacuum jacket.
- **Safe:** Burst disc, pressure relief valve and complies with PED / ASME design codes.
- **Automation and data-logging without PC:** Automatic profiles are possible for reaction temperature, stirrer speed, reagent addition and sampling. All data is logged in a .csv file and can be downloaded to a USB stick automatically.
- **Optional PC control:** The PC software offers advanced recipe control, total automation of all parameters, alarms and real time graphs.
- **Wide temperature range:** -80 to +200°C.

### Atlas Potassium Pressure System features:

The Atlas Potassium Pressure System is designed for applications where elevated pressures are required e.g. hydrogenations, carbonylations, etc.

The basic system, allows automatic temperature and stirrer control and pressure sensing. Upgrades include the Atlas Gas Selection Module, Atlas Pressure Control Module, gas flow meters and full PC software control and automation.



### Modes of operation:

#### Manual pressure control

Use the Atlas Pressure Node and Sensor with manual valves to control pressure. Pressure, temperature and stirrer speed are displayed and logged automatically.

#### Automatically maintain a pressure

By using the Atlas Pressure Control Module a consistent pressure to the reaction is maintained over the reaction period and can automatically vent in the case of over pressure. This module also offers, Vent and Purge options.

#### Pressure control with mass flow monitoring

Maintain a pressure and monitor mass flow. Ideal for gas uptake monitoring.

#### Mass flow control

Dose a known quantity of gas using the mass flow controller.

#### Off gas monitoring

### An Atlas Potassium Pressure System can be upgraded with:

#### Volumetric dosing and autosampling

Add the Atlas Syringe Pump for versatile volumetric dosing. Automates reagent addition, multi reagent addition, temperature dependent dosing and autosampling.

#### Calorimetry

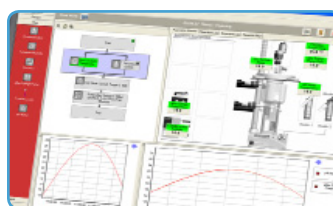
Use heat flow calorimetry (HFC) or power compensation calorimetry (PCC) to generate power and enthalpy graphs with the click of a button.

#### Software

Adding PC software allows complex recipe control, real time data plotting and control of third party hardware.

#### pH control

This can be configured to control the pH of a reaction by adding either acid and/or base as necessary to maintain a set pH value



Left: Atlas Gas Selection Module

Above: Atlas Software control

Right: Atlas Potassium Pressure System, pressure rated to 3bar



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